Week 17 Bio Warmups

Match each description with the correct type of selection.

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| 1. | A volcanic eruption on one of the Hawaiian Islands killed many of the insects. One insect that did make it had a hard outer shell. Only the cuckoos with the largest beaks could eat this insect. | a. | Directional selection |
| 2. | A butterfly species ranges in color from bright red to bright yellow. The very red or very yellow butterflies don’t get eaten as often because they look like other butterflies that are toxic. The medium orange butterflies don’t have this advantage. | b. | Stabilizing selection |
| 3. | Very heavy and very tiny elephant babies do not survive as well as elephants that have an average weight when they are born. | c. | Disruptive selection |

Identify each example as analogous structures (similar function, different ancestors) or homologous structures (similar structure, common ancestor).

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| 1. | Wing of a dragonfly and wing of a bat | a. | analogous |
| 2. | Bones of a whale fin and bones of a bird wing | b. | homologous |
| 3. | Sleek body shape of a shark and a dolphin |  |  |
| 4. | Leg of a horse and arm of a human |  |  |
| 5. | Jumping legs of a grasshopper and a kangaroo |  |  |

Match each example with the appropriate pattern of evolution.

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| 1. | An ancestral bird species evolved to take advantage of many different habitats, resulting in many different species of birds. | a. | Coevolution |
| 2. | Penguins, seals, and sharks share a similar streamlined body that allows them to move through the water quickly. | b. | Adaptive Radiation |
| 3. | The shape of a hummingbird beak and the flower it pollinates have changed in response to each other over time. | c. | Convergent evolution |
| 4. | A type of divergent evolution. |  |  |

Identify each of the following statements as true or false.

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| 1. | In order for natural selection to occur, organisms with advantageous traits have to survive and reproduce more than those without. |
| 2. | Individual organisms can adapt to their environment. |
| 3. | A bacterial population developing a resistance to antibiotics is direct evidence of evolution. |
| 4. | Natural selection causes the frequency of alleles in a population to change over time. |
| 5. | Punctuated equilibrium means species change slowly and steadily over time. |

Match each statement with the correct definition.

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| 1. | Concept that evolution occurs over long periods of time that are interrupted by geologically brief periods of change | a. | Geographic isolation |
| 2. | Speciation that results from two populations being physically separated for long periods of time. | b. | Survival of the fittest |
| 3. | An organism’s ability to survive and reproduce in its environment | c. | Punctuated Equilibrium |
| 4. | Organisms who survive and are able to reproduce (no matter how they do it) pass on their genes | d. | Fitness |
| 5. | Speciation that results from organisms not interbreeding due to different mating rituals. | e. | Behavioral isolation |